

CONTENTS TO VOLUME 105

Hypotheses

- An explanation of the proton uptake of chloroplast membranes in terms of asymmetry of the surface charges, *J. T. Duniec, S. W. Thorne* 1
- A mechanism for controlling the stacking and unstacking of chloroplast thylakoid membranes, *J. Barber, W. S. Chow* 5

Research Letters

- Probing the sensitivity of ^{31}P NMR chemical shifts to hydrogen bonding and to stereochemistry, *F. E. Evans, N. O. Kaplan* 11
- Influence of trace metals on alloxan cytotoxicity in pancreatic islets, *K. Grankvist, S. Marklund, I.-B. Täljedal* 15
- Inhibition by insulin of the adrenaline-stimulated adenylate cyclase in rat adipose tissue, *B. Lambert, C. Jacquemin* 19
- Characterization of immunoreactive components of insulin and somatostatin in canine pancreatic juice, *J. M. Conlon, D. Rouiller, G. Boden, R. H. Unger* 23
- Influence of glucagon on the synthesis of phosphatidylcholines and phosphatidylethanolamines in monolayer cultures of rat hepatocytes, *M. J. H. Geelen, J. E. M. Groener, C. G. M. de Haas, L. M. G. van Golde* 27
- Regulation of 25-OHD $_3$ metabolism by parathyroid hormone in primary chick kidney cell cultures, *E. Spanos, D. J. Brown, I. MacIntyre* 31
- Glycogen debranching enzyme from chicken pectoralis muscle. Comparison with a 165 000 mol. wt myofibrillar protein, *C. W. Heizmann, H. M. Eppenberger* 35
- Presence of a HCO $_3^-$ -activated ATPase in pancreatic islets, *A. Sener, I. Valverde, W. J. Malaisse* 40
- Photoaffinity labelling of a tyrosine chemoreceptor in *Pseudomonas aeruginosa*, *R. Barber, S. Primrose, G. Dodd* 43
- Activation of a nuclease by pppA2'p5'A2'p5'A in intact cells, *B. R. G. Williams, R. R. Golgher, I. M. Kerr* 47
- Association of lipoprotein lipase with very low density lipoprotein-remnants: influence of high density lipoproteins, *R. L. Jackson, N. Matsuoka, J. A. K. Harmony* 53
- The exogenous lipid requirement for histamine release from rat peritoneal mast cells stimulated by concanavalin A, *G. A. Smith, T. R. Hesketh, R. W. Plumb, J. C. Metcalfe* 58
- Compact globular structure of protein S15 from *Escherichia coli* ribosomes, *Z. V. Gogia, S. Yu. Venyaminov, V. N. Bushuev, I. N. Serdyuk, V. I. Lim, A. S. Spirin* 63
- Analysis of tRNA population from *Drosophila melanogaster* by means of polyacrylamide gel mapping, *A. Mazabraud, J.-P. Garel* 70
- Optically detected magnetic resonance study of benzo[a]pyrene-7,8-dihydrodiol 9,10-oxide covalently bound to DNA, *S. M. Lefkowitz, H. C. Brenner, D. G. Astorian, R. H. Clarke* 77
- Magnetic resonance studies of the conformation of manganese (II) coenzyme A, *G. E. Wilson, Jr* 81
- Submitochondrial localization of transferrin and iron accumulated by isolated rat liver mitochondria, *K. Konopka, E. Turska* 85
- Enzymatic measurement of adenine and guanine(plus inosine) triphosphates and diphosphates in isolated cells and the mitochondrial matrix compartment obtained from rat liver, *T. P. M. Akerboom, W. K. G. Krietsch, G. Kuntz, H. Sies* 90

Presence and possible role of calcium-dependent regulator (calmodulin) in rat islets of Langerhans, <i>M. C. Sugden, M. R. Christie, S. J. H. Ashcroft</i>	95
Superprecipitation of heavy meromyosin with aggregated F-actin, <i>J. Borejdo, N. Garty, T. Shimon, S. Himmelhoch, A. Oplatka</i>	101
Distribution in rat tissues of modulator-binding protein of particulate nature: studies with ³ H-modulator protein, <i>K. Sobue, Y. Muramoto, R. Yamazaki, S. Kakiuchi</i>	105
Pituitary hormones influence polyphosphoinositide metabolism in rat brain, <i>J. Jolles, K. W. A. Wirtz, P. Schotman, W. H. Gispen</i>	110
The in vitro transfer of [¹⁴ C]dimyristoylphosphatidylcholine from liposomes to subfractions of human plasma high density lipoproteins as resolved by isoelectric focusing, <i>J. Damen, M. Waite, G. Scherphof</i>	115
Differences of chemical structures of <i>Pseudomonas aeruginosa</i> lipopolysaccharide essential for adjuvanticity and antitumor and interferon-inducing activities, <i>Y. Cho, K.-i. Tanamoto, Y. Oh, J. Yuzuru Homma</i>	120
On the possible hydrolysis of the α -L-iduronide linkage by β -D-glucuronidase (EC 3.2.1.31), <i>M. Isemura, H. Kosaka, T. Ono</i>	123
Formation of dUMP-containing DNA by Brij-58 lysed CHO cells, <i>P. Reinhard, M. Schluchter</i>	127
Transcription of globin genes in reticulocyte chromatin, <i>D. Maryanka, G. J. Cowling, J. Allan, S. J. Fey, P. Huvoš, H. J. Gould</i>	131
Microsecond photooxidation kinetics of cytochrome <i>c</i> ₂ from <i>Rhodopseudomonas sphaeroides</i> : in vivo and solution studies, <i>R. E. Overfield, C. A. Wraight, D. DeVault</i>	137
Partial purification of cytochrome P-450 of <i>Candida tropicalis</i> and reconstitution of hydroxylase activity, <i>J. C. Bertrand, M. Gilewicz, H. Bazin, M. Zacek, E. Azoulay</i>	143
Inhibition of alkaline phosphatase isozyme conversion by protease inhibitors in <i>Escherichia coli</i> K-12, <i>A. Nakata, H. Shinagawa, J. Kawamata</i>	147
Deoxycholate enhancement of an intermediate of peptidoglycan synthesis in <i>Micrococcus luteus</i> , <i>S. J. Thorpe, H. R. Perkins</i>	151
Inhibition of bacterial glutamate decarboxylase by tricarboxylic acid cycle intermediates, <i>J. T. Gerig, L. Kwock</i>	155
Virus infection affects the molecular properties and activity of glucose-6-P dehydrogenase in <i>Anacystis nidulans</i> a cyanobacterium: Novel aspect of metabolic control in a phage-infected cell, <i>A. Balogh, G. Borbély, Cs. Cséke, J. Udvardy, G. L. Farkas</i>	158
Characterization and partial purification of phosphate-binding proteins in <i>Candida tropicalis</i> , <i>R. Jeanjean, N. Fournier</i>	163
A modified subunit of mitochondrial ATPase in mutants of <i>Saccharomyces cerevisiae</i> with decreased sensitivity to dicyclohexylcarbodiimide, <i>M. D. Partis, E. Bertoli, E. D. Zanders, D. E. Griffiths</i>	167
Determination of the membrane potential in bacterial membrane vesicles from the accumulation of <i>N</i> -methyldepropine, <i>P. G. Ruifrok, W. N. Konings, D. K. F. Meijer</i>	171
Trypsination of inside-out chloroplast thylakoid vesicles for localization of the water-splitting site, <i>C. Jansson, B. Andersson, H.-E. Åkerlund</i>	177
Reconstitution of a functional acetylcholine regulator under defined conditions, <i>J.-P. Changeux, T. Heidmann, J.-L. Popot, A. Sobel</i>	181

Hypothesis

A mechanism for the reduction of cytochromes by quinols in solution and its relevance to biological electron transfer reactions, <i>P. R. Rich, D. S. Bendall</i>	189
---	-----

Research Letters

Ascorbic acid as a scavenger of singlet oxygen, <i>R. S. Bodaness, P. C. Chan</i>	195
---	-----

A circular dichroism study of cardiac myosin and its interaction with ADP, <i>S. J. Smith</i>	197
Demonstration of protein asymmetries in the plasma membrane of cultured renal (MDCK) epithelial cells by lactoperoxidase-mediated iodination, <i>J. C. W. Richardson, N. L. Simmons</i>	201
Effects of acute ethanol administration on tyrosine aminotransferase activity, <i>C. Ribiere, H. Rouach, J. Nordmann, R. Nordmann</i>	205
Purification and crystallization of L-ornithine : α -ketoglutarate δ -aminotransferase from <i>Bacillus sphaericus</i> , <i>M. Yasuda, H. Misono, K. Soda, K. Yonaha, S. Toyama</i>	209
Redox Bohr-effects in the cytochrome system of mitochondria, <i>S. Papa, F. Guerrieri, G. Izzo</i>	213
The influence of age on the inducibility of cytochrome P-450 species in rabbit liver; susceptibility of the induced species to an unusual crosslinking reaction, <i>P. R. McIntosh, R. B. Freedman</i>	217
Transient opening of brush border membrane vesicles in alkaline media: Preservation of D-glucose transport after removal of extrinsic proteins, <i>A. Klip, S. Grinstein, T. Marti, G. Semenza</i>	224
Studies on cobalt-reconstituted trout hemoglobins, <i>E. E. Di Iorio, E. Fioretti, I. Ariani, F. Ascoli, G. Rotilio, M. Brunori</i>	229
Amino acid sequences of rabbit skeletal β - and cardiac tropomyosins, <i>A. S. Mak, W. G. Lewis, L. B. Smillie</i>	232
Insulin activates glycogen synthase in phosphorylase kinase deficient mice, <i>Y. Le Marchand-Brustel, P. T. W. Cohen, P. Cohen</i>	235
Native and latent forms of skeletal muscle phosphorylase phosphatase, <i>M. Laloux, H. G. Hers</i>	239
The C-terminal fragment of human glutathione reductase contains the postulated catalytic histidine, <i>R. Untucht-Grau, G. E. Schulz, R. H. Schirmer</i>	244
Octameric structure of yeast phosphofructokinase as determined by crosslinking with disuccinimidyl β -hydromuconate, <i>M. N. Tijane, F. J. Seydoux, M. Hill, C. Roucoux, M. Laurent</i>	249
The enrichment of chicken embryo tRNA genes in nucleosomal DNA by reversed phase chromatography, <i>B. Wittig, S. Wittig</i>	254
Non-cooperative response of actin-cystein 373 in cooperatively behaving regulated actin filaments, <i>M. Porter, A. Weber</i>	259
Primary structure of the swinging arms of the pyruvate dehydrogenase complex of <i>Escherichia coli</i> , <i>G. Hale, R. N. Perham</i>	263
Cooperative binding of manganese to citrate lyase from <i>Klebsiella aerogenes</i> , <i>H. SivaRaman, C. SivaRaman</i>	267
Presence of a cytochrome b-559 in <i>Methanosarcina barkeri</i> , <i>W. Kühn, K. Fiebig, R. Walther, G. Gottschalk</i>	271
Physiological change in the ionophore-portion of proton-translocating ATPase in an uncoupled mutant of <i>Escherichia coli</i> , <i>H. Kanazawa, M. Futai</i>	275
Identification of malondialdehyde as the TBA-reactant formed by bleomycin-iron free radical damage to DNA, <i>J. M. C. Gutteridge</i>	278
Glutathione turnover and amino acid uptake in yeast; evidence for the participation of the γ -glutamyl cycle in amino acid transport, <i>G. O. Osuji</i>	283
Adenosine diphosphate metabolism by cultured human umbilical endothelial cells, <i>A. M. Dosne, B. Escoubet, E. Bodevin, J. P. Caen</i>	286
A structural requirement for the conversion of prostaglandin endoperoxides to thromboxanes, <i>U. Diczfalusy, S. Hammarström</i>	291
Muscarinic receptor-mediated increase in cyclic GMP level in isolated bovine adrenal medullary cells, <i>N. Yanagihara, M. Isosaki, T. Ohuchi, M. Oka</i>	296
A novel carbonic anhydrase from the ovine parotid gland, <i>R. T. Fernley, R. D. Wright, J. P. Coghlan</i>	299
Fractionation of antibodies to acetylcholine receptor according to antigenic specificity, <i>D. Bartfeld, S. Fuchs</i>	303

Evidence for the involvement of human polymorphonuclear leucocyte mannose-like receptors in the phagocytosis of <i>Escherichia coli</i> , <i>G. Rottini, F. Cian, M. R. Soranzo, R. Albrigo, P. Patriarca</i>	307
In vitro biosynthesis of cold insoluble globulin (fibronectin) by mouse peritoneal macrophages, <i>S. Johansson, K. Rubin, M. Höök, T. Ahlgren, R. Seljelid</i>	313
On a neutral proteolytic system in rat liver mitochondria, <i>M. C. Duque-Magalhães</i>	317
Calcium and calmodulin activation of muscle phosphorylase kinase: Effect of tryptic proteolysis, <i>A. A. DePaoli-Roach, J. B. Gibbs, P. J. Roach</i>	321
Effect of ACTH ¹²⁵ I-labeled angiotensin II binding and response by rat adrenal glomerulosa cells, <i>A. Jagannadha Rao, J.-G. Lehoux</i>	325
Effect of colchicine and vinblastine on the coupling of insulin binding and insulin action in fat cells, <i>H. U. Häring, W. Kemmler, K. D. Hepp</i>	329
Evidence suggesting that the NADPH/NADP ratio modulates the splitting of the isocitrate flux between the glyoxylic and tricarboxylic acid cycles, in <i>Escherichia coli</i> , <i>J. Bautista, J. Satrustegui, A. Machado</i>	333
NMR saturation transfer and line shape analyses of cyclic tetradepsipeptide AM toxin II: Conformational equilibrium with very unequal populations, <i>T. Higashijima, T. Inubushi, T. Ueno, T. Miyazawa</i>	337
The preparation of nerve growth factor from the prostate of the guinea-pig and isolation of immunogenically pure material from the mouse submandibular gland, <i>C. A. Chapman, B. E. C. Banks, J. R. Carstairs, F. L. Pearce, C. A. Vernon</i>	341
Inhibition of cell spreading by lysosomotropic amines, <i>P. O. Seglen, P. B. Gordon</i>	345
Low pH binding of vanadyl to bovine lactoferrin: electron spin resonance studies, <i>A. Carmichael, J. S. Vincent</i>	349
Artifacts in ferritin isoelectric focussing profiles, <i>S. Shinjo, P. M. Harrison</i>	353
Partial amino-terminal sequence of cell-free translation product encoded by bovine corticotropin- β -lipotropin precursor messenger RNA, <i>M. Nakamura, A. Inoue, S. Nakanishi, S. Numa</i>	357
Isosteric metal complexes of ionophore A23187: a basis for cation selectivity, <i>D. R. Pfeiffer, C. M. Deber</i>	360
The role of cytochrome <i>f</i> in ferredoxin-dependent electron-transport reactions in spinach chloroplasts, <i>R. K. Chain</i>	365
The influence of NO ₃ ⁻ on particulate 6-phosphogluconate dehydrogenase activity in pea roots, <i>M. J. Emes, H. Ashihara, M. W. Fowler</i>	370
Regulation of mitochondrial biogenesis: further evidence for proteinase involvement, <i>A. V. Galkin, T. V. Tsoi, V. N. Luzikov</i>	373
The use of Meldolablu in isozyme stains after electrophoresis, <i>V. S. Turner, D. A. Hopkinson</i>	376
Molecular dynamics of spectrin-actin at low pH: Saturation transfer EPR studies, <i>L. W.-M. Fung, M. J. Soo Hoo, W. A. Meena</i>	379
Sodium ion binding to parvalbumin studied by ²³ Na NMR: A reply, <i>Ch. Gerday, J. Grandjean, P. Laszlo</i>	384
Book Reviews and Book List No. 19	387
Corrigenda	403
Author Index	407
Table of Contents	417